Leveraging AI for Sustainability-Linked Loans

Recent Developments

As part of Singapore's National Artificial Intelligence (**AI**) Programme in Finance, Project NovA! was launched in 2021. The Project NovA! consortium is led by the Monetary Authority of Singapore (**MAS**) and the Smart Nation Digital Government Office and consists of key industry players, including several Singapore-based banks active in the sustainability financing sector. During Phase 1 of Project NovA!, the Project NovA! consortium identified key challenges for sustainability-linked loans (**SLL**) in the real estate sector and conceptualised and developed a Minimum Viable Product (**MVP**) that seeks to leverage AI and data analytics to assist banks when issuing SLLs in the real estate sector. On 14 November 2023, the MAS announced the availability of the AI-powered MVP developed by the Project NovA! consortium pursuant to Phase 1 of Project NovA!.

At the Singapore FinTech Festival 2023, Mr Tan Kiat How, Senior Minister of State for the Ministry of National Development and Ministry of Communication and Information (**Senior Minister Tan**) announced the launch of Phase 2 of NovA!, which involved collaboration between the MAS and the Building and Construction Authority (**BCA**) to tap on the BCA's Super Low Energy Building (**SLEB**) database to unlock country-wide data on green buildings to refine the AI model of NovA!. This is expected to generate a more comprehensive set of sustainability benchmark insights and analytics.

The focus of NovA! is currently on SLLs for real estate due to the real estate sector's significant contribution to Singapore's carbon dioxide emissions and the rapid increase in demand for SLLs in the sector. That said, there are plans to explore potential opportunities for sustainable financing in other sectors such as manufacturing, power and transportation, with the ultimate long-term vision to promote the platform's adoption and establish a global decarbonisation blueprint. Since these developments may eventually extend beyond the real estate sector, parties may wish to consider the impact these technological advances may have on the current documentation for SLLs which is still being refined.

Key Issues Sought to Be Addressed by The NovA! MVP

A [NovA! whitepaper](#) on accelerating sustainability with AI (**NovA! Whitepaper**) was published by the MAS in November 2023 and provides comprehensive coverage on the background, expected business value and impact of the NovA! MVP. A summary of the key takeaways in the NovA! Whitepaper which are relevant to SLLs is set out below. These serve as background and a foil for the subsequent discussion on documentary considerations.

Lack of availability and coverage of Environmental, Social, and Governance (ESG) data

One of the key challenges highlighted in the NovA! Whitepaper is the lack of ESG data in the SLL market which makes it difficult for financial institutions to set well-defined sustainability performance targets (**SPTs**) and make informed lending decisions. Most sustainability financings rely on data provided by the borrower companies which is then independently verified by a qualified external third-party service provider. Private companies, which are the most common type of business in Singapore, are often unrated and have limited access to ESG data. They are also not subject to the same disclosure requirements for certain ESG data as public companies.

The Sustainability Linked Loan Principles (**SLLP**), published by the Asia Pacific Loan Market Association, the Loan Market Association (**LMA**) and the Loan Syndication and Trading Association, recommend that borrowers should, at least once per annum, provide lenders participating in the loan with:

(a)   Up-to-date information sufficient to allow them to monitor the performance of the SPTs and to determine that the SPTs remain ambitious and relevant to the borrower's business; and

(b)   A sustainability confirmation statement with a verification report attached, outlining the performance against the SPTs for the relevant year and the related impact, and timing of such impact, on the loan's economic characteristics.

The annual reporting and verification reflect the common position across current documentation for SLLs. Given that information is often provided (and verified) on an annual basis, it is likely challenging to obtain comprehensive ESG data on private companies for lenders and other organisations.

NovA! MVP seeks to expand environmental data coverage through collaboration with government agencies like the BCA. For example, Phase 2 of NovA! would substantially increase the amount of ESG data available by integrating the SLEB database into the framework. A new integrated blockchain-based digital platform called "Gprnt.ai" which is part of the MAS' initiative Project Greenprint, is also anticipated to be launched in the first quarter of 2024 and this may further streamline access to, and collection and use of, ESG data.

In order for AI and data analytics to be effective, it is integral for there to be large and significant data sets to be input and processed through the algorithms which form the backbone of AI systems. The NovA! Whitepaper explicitly recognised that peer groups of companies can presently only be tabulated on the basis of pre-determined thresholds due to data insufficiency preventing any reliable AI approaches.

Inconsistent ESG scoring and lack of transparency surrounding sustainability targets

The NovA! Whitepaper highlighted that there is significant divergence in ESG ratings between ESG rating providers, with research indicating an average correlation of 0.61 among six prominent rating agencies (KLD, MSCI, Sustainalytics, Moody's, S&P Global and Refinitiv). This was attributed in part due to the lack of transparency in the methodologies adopted by each ESG rating provider.

This inconsistency may consequently lead to greenwashing concerns. In the context of SLLs, the LMA has identified the following three key ways in which greenwashing may occur:

(a)   Through key performance indicators (**KPIs**) that are not material and core to the business of the borrower;

(b)   Selection of SPTs that are not sufficiently ambitious or meaningful; or

(c)   Inaccurate or insufficient monitoring, measuring, benchmarking and/or disclosing of borrower performance against SPTs.

Inconsistent ESG scoring potentially exacerbates the selection of SPTs that are sufficiently ambitious and meaningful since the current practice is for SPTs to be set collaboratively between the borrower and the lender(s). The NovA! MVP aims to offer an industry benchmarking feature to enhance transparency and ensure a more accurate starting point for discussions on the selection of SPTs.

Lack of real-time monitoring of SLL borrower

As mentioned above, it is common for SLLs to have an annual reporting and verification requirement. In this regard, up-to-date information in relation to SPTs may not be provided in a timely manner. The NovA! Whitepaper recognises that the verification process through audits or Second Party Opinion (SPO) providers adds friction to the process and further slows down effective monitoring of SLLs, resulting in data gaps and the risk of greenwashing driven by inaccurate or false information submitted by borrowers. The NovA! MVP intends to address this issue by providing banks with new real-time monitoring capabilities to facilitate better management of SLLs.

Further, at the Singapore FinTech Festival 2023, Senior Minister Tan also raised the point that many banks currently read and interpret various types of disclosures manually when setting and monitoring SPTs. He also explained that this takes up significant time for banks, may result in human error, and has negative downstream impacts on ensuring compliance.

The NovA! MVP uses an Autonomous Documentation Insights Engine (**ADIE**) which utilises Natural Language Processing to streamline the process of analysing data so that banks will be able to extract meaningful insights on sustainability performance efficiently from the documents disclosed by borrowers.

How core features of the NovA! MVP might affect SLL documentation going forward

The NovA! Whitepaper highlights three core features of the NovA! MVP which are designed to address the challenges above. These have already been briefly alluded to and the following sections are intended to discuss the potential implications on local SLL documentation.

Peer and Industry Benchmarking

Going forward, it is expected that, apart from the announced partnership with the BCA, there will be further strategic collaborations with other government bodies such as the Public Utilities Board and Energy Market Authority to allow access to a bigger pool of ESG data to facilitate establishing peer and industry benchmarks.

The NovA! Whitepaper indicated that industry groups are clustered based on sector and asset function type, while peer groups are clustered based on building information such as asset function type, gross floor area (GFA), occupancy rates, and age. It is anticipated that further AI clustering approaches may be adopted once sufficient performance data has been obtained. This would potentially allow banks to better tailor SPTs for each borrower.

While this feature is intended as a starting point for discussions between relationship managers and borrowers on setting ambitious and meaningful SPTs, given that the tenure of loans may span several years and the exponential influx of ESG data is expected to further refine peer and industry benchmarks, parties may consider revising their SPTs at appropriate junctures to ensure that they remain ambitious and meaningful to the borrower's business to combat greenwashing concerns.

In current local SLL documentation, parties may agree to provide for the entry into good faith discussions to revise SPTs where there is a change in the methodology or measurement of SPTs or if any SPT is determined to be no longer appropriate. In this regard, it is not common to have a fixed review of SPTs while the loan subsists (i.e., SPTs would typically be locked in from day one and revised only in certain situations). As the NovA! MVP develops further and more data is available to be processed, parties may wish to consider any significant change in the peer and industry benchmarking as one of the review events.

Monitoring against selected KPIs/SPTs

The NovA! MVP is intended to allow banks to monitor and track borrowers' performance against SPTs in near real-time (on a monthly basis). As discussed above, the SLLP recommend that borrowers should provide lenders with up-to-date information on SPTs at least once per annum. This is often the reflected position in current local SLL documentation, although parties are free to agree on other reporting requirements. The availability of consistent monitoring would likely have a consequential effect on margin adjustments.

The current common practice is for margin adjustments to take effect on the first day of the next interest period for a loan following receipt of a sustainability compliance certificate / sustainability report. This will typically apply for a fixed period until the next sustainability compliance certificate / sustainability report is delivered or (as the case may be) has not been delivered when required to be delivered. Given that reporting is usually on an annual basis, this would mean that the margin would typically only be adjusted annually. If banks are able to reliably monitor and track borrowers' performance against SPTs, this would provide more flexibility as to when the margin may be adjusted to account for performance or (as the case may be) non-performance of SPTs. That said, it must also be recognised that certain borrowers' initiatives may take time to implement and/or results may only be apparent over a specific course of time.

With the ability to consistently monitor the performance of SPTs, parties may wish to consider the following points in SLL documentation:

(a)   Frequency of testing of SPTs;

(b)   Frequency of verification of SPTs by a qualified external third-party service provider;

(c)   Whether the information provided *via* the NovA! MVP will also need to be independently verified before there is any effect on the margin; and

(d)   How often the margin is to be adjusted.

Further, it is anticipated that the NovA! MVP will also potentially be able to forecast the future performance of borrowers against SPTs using AI technology. These forecasts may be for up to five years and may be dynamically updated based on historical data. This raises the question of what consequences there may be for a SLL when it is projected that a borrower would not be able to satisfy its SPTs going forward. The usual consequence in current local SLL documentation is that failure to fulfil one or more SPTs would typically only result in restoration of the default margin (i.e., any sustainability discount would no longer apply). A declassification event, whereupon facilities cease to be classified as "sustainability-linked", may also be considered if it is projected that there will be consecutive non-achievement of SPTs that remain unremedied for an extended period of time. That said, given the

uncertainty of the accuracy of such predictions in the near future, it may be more reasonable to implement such declassification only when there is actual non-achievement of SPTs.

ADIE

Senior Minister Tan, in his speech at the Singapore FinTech Festival 2023, indicated that ADIE represented a "shift away from manual processing of disclosure documents, and enables timely and accurate extraction of sustainability insights from diverse sources". The time savings from ADIE is expected to facilitate effective collaboration between banks and borrowers in obtaining complete disclosure of ESG data. As this technology appears more relevant to the onboarding of borrowers at the start of a sustainability financing transaction, it is unlikely to have a significant impact on local SLL documentation.

Leveraging AI for the future

The NovA! MVP represents only the first step towards leveraging AI for the future and while it is currently limited to the real estate sector, it remains to be seen how much further it will develop. As AI technology continues to develop and facilitate the accessibility of SLLs to more companies, it is vital that parties update and tailor local SLL documentation to reflect these latest developments to the extent such technology is being utilised by banks and borrowers.

If you would like information and/or assistance on the above or any other area of law, you may wish to contact the Partner at WongPartnership whom you normally work with or any of the following Partners:

Felix LEE
Partner – Banking & Finance
d: +65 6416 8035
e: felix.lee
@wongpartnership.com
Click here to view Felix's CV.

Clarence KANG
Partner – Banking & Finance
d: +65 6416 2419
e: clarence.kang
@wongpartnership.com
Click here to view Clarence's CV.

in Connect with WongPartnership.

WPG MEMBERS AND OFFICES

- contactus@wongpartnership.com

SINGAPORE

-
WongPartnership LLP
12 Marina Boulevard Level 28
Marina Bay Financial Centre Tower 3
Singapore 018982
t +65 6416 8000
f +65 6532 5711/5722

CHINA

-
WongPartnership LLP
Shanghai Representative Office
Unit 1015 Link Square 1
222 Hubin Road
Shanghai 200021, PRC
t +86 21 6340 3131
f +86 21 6340 3315

INDONESIA

-
Makes & Partners Law Firm
Menara Batavia, 7th Floor
Jl. KH. Mas Mansyur Kav. 126
Jakarta 10220, Indonesia
t +62 21 574 7181
f +62 21 574 7180
w makeslaw.com

MALAYSIA

-
Foong & Partners
Advocates & Solicitors
13-1, Menara 1MK, Kompleks 1 Mont' Kiara
No 1 Jalan Kiara, Mont' Kiara
50480 Kuala Lumpur, Malaysia
t +60 3 6419 0822
f +60 3 6419 0823
w foongpartners.com

wongpartnership.com

MIDDLE EAST

-
Al Aidarous Advocates and Legal Consultants
Abdullah Al Mulla Building, Mezzanine Suite 02
39 Hameem Street (side street of Al Murroor Street)
Al Nahyan Camp Area
P.O. Box No. 71284
Abu Dhabi, UAE
t +971 2 6439 222
f +971 2 6349 229
w aidarous.com
-
Al Aidarous Advocates and Legal Consultants
Oberoi Centre, 13th Floor, Marasi Drive, Business Bay
P.O. Box No. 33299
Dubai, UAE
t +971 4 2828 000
f +971 4 2828 011

PHILIPPINES

-
Gruba Law
27/F 88 Corporate Center
141 Valero St., Salcedo Village
Makati City 1227, Philippines
t +63 2 889 6060
f +63 2 889 6066
w grubalaw.com